pwc 羅兵咸永道

Independent practitioner's assurance report

To the management of Hong Kong Internet Registration Corporation Limited ("HKIRC")

Scope

We have been engaged to perform a reasonable assurance engagement on the assertions by the management of HKIRC and Certizen Limited ("Certizen") (the "assertions"), an independent subservice organization that provides operation and maintenance services to HKIRC for its CA systems and associated certificate services, that for its Certification Authority ("CA") operations in the Hong Kong Special Administrative Region of the People's Republic of China (including Facility 1 and Facility 2), as of December 31, 2025 for its CAs as enumerated in Attachment A, HKIRC with Certizen as its subservice organization has:

- disclosed its TLS certificate lifecycle management business practices in Certification Practice Statement for d-Cert (Server), including its commitment to provide TLS certificates in conformity with the CA/Browser Forum Requirement on the HKIRC website, and provided such services in accordance with its disclosed practices,

- suitably designed, and placed into operation, controls to provide reasonable assurance that:

  - the integrity of keys and TLS certificates it manages is established and protected throughout their lifecycles; and

  - TLS subscriber information is properly authenticated (for the registration activities performed by HKIRC with Certizen as its subservice organization),

- suitably designed, and placed into operation, controls to provide reasonable assurance that:

  - logical and physical access to CA systems and data is restricted to authorized individuals;

  - the continuity of key and certificate management operations is maintained; and

  - CA systems development, maintenance, and operations are properly authorized and performed to

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maintain CA systems integrity,

in accordance with the WebTrust Principles and Criteria for Certification Authorities – TLS Baseline v2.10. The CA/Browser Forum Baseline Requirements for the Issuance and Management of Publicly-Trusted TLS Server Certificates require the CA to operate controls to adhere to the Network and Certificate System Security Requirements. The WebTrust Principles and Criteria for Certification Authorities – Network Security address this requirement and are reported on in a separate report.

HKIRC uses Certizen (subservice organization) to provide operation and maintenance services for its CA systems and associated certificate services. The controls at Certizen, are necessary, in combination with controls at HKIRC, for HKIRC to achieve the applicable WebTrust Criteria as set out in the assertions.

Certification Authority's Responsibilities

HKIRC's management is responsible for its assertion, including the fairness of its presentation, and the provision of its described services in accordance with the WebTrust Principles and Criteria for Certification Authorities – TLS Baseline v2.10.

Subservice Organization's Responsibilities

Certizen has provided an accompanying assertion titled "Assertion of Certizen Management" (Certizen assertion) about the services provided to HKIRC. Certizen Management is responsible for its assertion and providing services in accordance with the described practices of HKIRC and implementing, operating, and documenting controls designed in accordance with HKIRC's requirements, which enable HKIRC to achieve the applicable WebTrust Criteria as set out in the assertions.

Our Independence and Quality Management

We have complied with the independence and other ethical requirements of the Code of Ethics for Professional Accountants issued by the Hong Kong Institute of Certified Public Accountants (the "HKICPA"), which is founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behaviour.

Our firm applies Hong Kong Standard on Quality Management 1 as issued by the HKICPA, which requires the firm to design, implement and operate a system of quality management including policies or procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

Practitioner's Responsibilities

It is our responsibility to express an opinion on the assertions by the management of HKIRC and Certizen based on our work performed.

We conducted our work in accordance with Hong Kong Standard on Assurance Engagements 3000 (Revised) "Assurance Engagements Other Than Audits or Reviews of Historical Financial Information" issued by the HKICPA. This standard requires that we plan and perform our work to form the opinion.

A reasonable assurance engagement involves performing procedures to obtain sufficient appropriate evidence whether the assertions are fairly stated, in all material respects, in accordance with the WebTrust Principles and Criteria for Certification Authorities – TLS Baseline v2.10. The extent of procedures selected depends on the practitioner's judgment and our assessment of the engagement risk. Within the scope of our work we performed amongst others the following procedures: (1) obtaining an understanding of HKIRC's TLS certificate lifecycle management business practices, including its relevant controls over the issuance, renewal, and revocation of TLS certificates; (2) evaluating the suitability of the design of the controls; and (3) performing such other procedures as we considered necessary in the circumstances.

We did not perform procedures to determine the operating effectiveness of controls for any period. Accordingly, we express no opinion on the operating effectiveness of any aspects of HKIRC's and Certizen's controls, individually or in the aggregate.

The suitability of the design of the controls at HKIRC and their effect on assessments of control risk for subscribers and relying parties are dependent on their interaction with the controls, and other factors present at individual subscriber and relying party locations. We have performed no procedures to evaluate the suitability of the design of the controls at individual subscriber and relying party locations.

We believe that the evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Inherent Limitation

Because of the nature and inherent limitations of controls, HKIRC and Certizen's ability to meet the aforementioned criteria may be affected. For example, controls may not prevent, or detect and correct, error, fraud, unauthorised access to systems and information, or failure to comply with internal and external policies or requirements. Also, the projection of any opinion based on our findings to future periods is subject to the risk that changes may alter the validity of such opinion.

Opinion

In our opinion, as of December 31, 2025, the assertions by the management of HKIRC and Certizen, as referred to above, are fairly stated, in all material respects, in accordance with the WebTrust Principles and Criteria for Certification Authorities – TLS Baseline v2.10.

Emphasis of Matter

We draw attention to the fact that this report does not include any representation as to the quality of HKIRC and Certizen's services beyond those covered by the WebTrust Principles and Criteria for Certification Authorities – TLS Baseline v2.10, nor the suitability of any of HKIRC and Certizen's services for any customer's intended purpose. Our opinion is not modified in respect of this matter.

Purpose and Restriction on Use

The assertions were prepared for use in connection and for submitting root inclusion request to major browser vendors using the WebTrust Principles and Criteria for Certification Authorities – TLS Baseline v2.10 designed for this purpose. As a result, the assertions may not be suitable for another purpose. This report is intended solely for the management of HKIRC in connection with submitting root inclusion request to major browser vendors in connection with the WebTrust Principles and Criteria for Certification Authorities – TLS Baseline v2.10.

Our report is not to be used for any other purpose. We do not assume responsibility towards or accept liability to any other parties for the contents of this report.

PricewaterhouseCoopers

Certified Public Accountants

Hong Kong, January 2, 2026

Attachment A

The list of CAs and certificates in scope as of December 31, 2025 is as follow:

Root CAs

CA #	Cert #	Subject	Issuer	Serial	Key Algorithm	Key Size	Digest Algorithm	SKI	SHA256 Fingerprint
1	1	CN=HKCA Root CA 2 O=Hong Kong Internet Registration Corporation Limited L=Hong Kong ST=Hong Kong C=HK	CN=HKCA Root CA 2 O=Hong Kong Internet Registration Corporation Limited L=Hong Kong ST=Hong Kong C=HK	06cafc8343591814b02e9432f7f3ffa5f11b3c5b	rsaEncryption	(4096 Bits)	sha256WithRSAEncryption	1c6833e335b3fa57661b524da4b48737aa418fa9	98:90:08:22:A3:D6:A9:7B:D8:31:0D:05:70:F1:E6:A5:51:B6:B8:35:6F:FE:3D:4E:82:58:23:8E:22:86:C0:6A

Sub CAs

CA #	Cert #	Subject	Issuer	Serial	Key Algorithm	Key Size	Digest Algorithm	SKI	SHA256 Fingerprint
1	1	CN=HKCA d-Cert DV SSL CA 2 - 25 O=Hong Kong Internet Registration Corporation Limited L=Hong Kong ST=Hong Kong C=HK	CN=HKCA Root CA 2 O=Hong Kong Internet Registration Corporation Limited L=Hong Kong ST=Hong Kong C=HK	30995ec319a8c8335aa75e9fdd12fe1c18aafbd6	rsaEncryption	(2048 Bits)	sha256WithRSAEncryption	63e458303b08e716dcaa7d81dff7988cec2c1c9a	6C:B0:1D:5B:11:20:1C:5E:5D:BD:E2:EB:0A:45:D4:00:AE:F3:FF:5E:EF:63:90:76:B9:E8:38:2D:F3:B7:92:69
2	1	CN=HKCA d-Cert OV SSL CA 2 - 25 O=Hong Kong Internet Registration Corporation Limited L=Hong Kong ST=Hong Kong C=HK	CN=HKCA Root CA 2 O=Hong Kong Internet Registration Corporation Limited L=Hong Kong ST=Hong Kong C=HK	5ca4c51c0f85ba969b728cc25ff17cc9d068d07f	rsaEncryption	(2048 Bits)	sha256WithRSAEncryption	87404afbddcd2a406efc0b00695b96729cc90261	C5:F4:88:39:B2:14:94:A1:16:9D:36:FB:0C:52:D1:98:FD:3F:62:DF:1D:2E:21:79:E0:94:1E:4F:B6:08:41:52

CA #	Cert #	Subject	Issuer	Serial	Key Algorithm	Key Size	Digest Algorithm	SKI	SHA256 Fingerprint
3	1	CN=HKCA d-Cert EV SSL CA 2 - 25 O=Hong Kong Internet Registration Corporation Limited L=Hong Kong ST=Hong Kong C=HK	CN=HKCA Root CA 2 O=Hong Kong Internet Registration Corporation Limited L=Hong Kong ST=Hong Kong C=HK	7c8a89a56a845332fad3b22ff64981418obffde7	rsaEncryption	(2048 Bits)	sha256WithRSAEncryption	b4e2b7cd19104fb1e81e0774b073e06644448c8c	97:7B:CE:D8:9D:7B:83:75:1D:65:0E:C3:B6:FD:94:72:B7:13:B2:3B:8E:C1:FC:EC:0F:96:6D:53:67:7E:44:5E

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PricewaterhouseCoopers
22/F, Prince's Building, Central, Hong Kong

January 2, 2026

Dear Sirs,

Assertion by Management as to the Disclosure of Business Practices and Controls over Hong Kong Internet Registration Corporation Limited – TLS Certification Authority Operations as of December 31, 2025

Hong Kong Internet Registration Corporation Limited ("HKIRC") operates the Certification Authority ("CA") services for its CAs as enumerated in Attachment A, and provides TLS CA services.

The management of HKIRC is responsible for establishing controls over its TLS CA operations, including its TLS CA business practices disclosure on its website, TLS key lifecycle management controls, and TLS certificate lifecycle management controls. These controls contain monitoring mechanisms, and actions are taken to correct deficiencies identified.

HKIRC uses Certizen Limited ("Certizen") (subservice organization) to provide operation and maintenance services for its CA systems and associated certificate services. The controls at Certizen, are necessary, in combination with controls at HKIRC, for HKIRC to achieve the applicable WebTrust Criteria as set out in the assertion. Certizen's management assertion is presented following this assertion.

There are inherent limitations in any controls, including the possibility of human error, and the circumvention or overriding of controls. Accordingly, controls placed into operation can only provide reasonable assurance with respect to HKIRC's Certification Authority operations.

HKIRC management has assessed its disclosures of its certificate practices and controls over its CA services. Based on that assessment, in HKIRC management's opinion, in providing its TLS CA services in the Hong Kong Special Administrative Region of the People's Republic of China (including Facility 1 and Facility 2), as of December 31, 2025, HKIRC has:

- disclosed its TLS certificate lifecycle management business practices in Certification Practice Statement for d-Cert (Server), including its commitment to provide TLS certificates in conformity with the CA/Browser Forum Requirement on the HKIRC website, and provided such services in accordance with its disclosed practices,

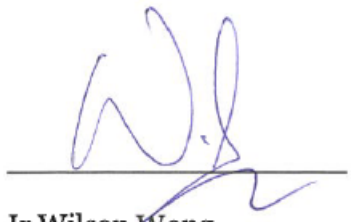
- suitably designed, and placed into operation, controls to provide reasonable assurance

that:

- the integrity of keys and TLS certificates it manages is established and protected throughout their lifecycles; and
- TLS subscriber information is properly authenticated (for the registration activities performed by HKIRC with Certizen as its subservice organization),

- suitably designed, and placed into operation, controls to provide reasonable assurance that:
  - logical and physical access to CA systems and data is restricted to authorized individuals;
  - the continuity of key and certificate management operations is maintained; and
  - CA systems development, maintenance, and operations are properly authorized and performed to maintain CA systems integrity,

in accordance with the WebTrust Principles and Criteria for Certification Authorities – TLS Baseline v2.10.



Ir Wilson Wong
Chief Executive Officer of Hong Kong Internet Registration Corporation Limited

Attachment A

The list of CAs and certificates in scope as of December 31, 2025 is as follow:

Root CAs

CA #	Cert #	Subject	Issuer	Serial	Key Algorithm	Key Size	Digest Algorithm	SKI	SHA256 Fingerprint
1	1	CN=HKCA Root CA 2 O=Hong Kong Internet Registration Corporation Limited L=Hong Kong ST=Hong Kong C=HK	CN=HKCA Root CA 2 O=Hong Kong Internet Registration Corporation Limited L=Hong Kong ST=Hong Kong C=HK	06cafc8343591814b02e9432f7f3ffa5f11b3c5b	rsaEncryption	(4096 Bits)	sha256WithRSAEncryption	1c6833e335b3fa57661b524da4b48737aa418fa9	98:90:08:22:A3:D6:A9:7B:D8:31:0D:05:70:F1:E6:A5:51:B6:B8:35:6F:FE:3D:4E:82:58:23:8E:22:86:C0:6A

Sub CAs

CA #	Cert #	Subject	Issuer	Serial	Key Algorithm	Key Size	Digest Algorithm	SKI	SHA256 Fingerprint
1	1	CN=HKCA d-Cert DV SSL CA 2 - 25 O=Hong Kong Internet Registration Corporation Limited L=Hong Kong ST=Hong Kong C=HK	CN=HKCA Root CA 2 O=Hong Kong Internet Registration Corporation Limited L=Hong Kong ST=Hong Kong C=HK	30995ec319a8c8335aa75e9fdd12fe1c18aafbd6	rsaEncryption	(2048 Bits)	sha256WithRSAEncryption	63e458303b08e716dcaa7d81dff7988cec2c1c9a	6C:B0:1D:5B:11:20:1C:5E:5D:BD:E2:EB:0A:45:D4:00:AE:F3:FF:5E:EF:63:90:76:B9:E8:38:2D:F3:B7:92:69
2	1	CN=HKCA d-Cert OV SSL CA 2 - 25 O=Hong Kong Internet Registration Corporation Limited L=Hong Kong ST=Hong Kong C=HK	CN=HKCA Root CA 2 O=Hong Kong Internet Registration Corporation Limited L=Hong Kong ST=Hong Kong C=HK	5ca4c51c0f85ba969b728cc25ff17cc9d068d07f	rsaEncryption	(2048 Bits)	sha256WithRSAEncryption	87404afbddcd2a406efc0b00695b96729cc90261	C5:F4:88:39:B2:14:94:A1:16:9D:36:FB:0C:52:D1:98:FD:3F:62:DF:1D:2E:21:79:E0:94:1E:4F:B6:08:41:52

CA #	Cert #	Subject	Issuer	Serial	Key Algorithm	Key Size	Digest Algorithm	SKI	SHA256 Fingerprint
3	1	CN=HKCA d-Cert EV SSL CA 2 - 25 O=Hong Kong Internet Registration Corporation Limited L=Hong Kong ST=Hong Kong C=HK	CN=HKCA Root CA 2 O=Hong Kong Internet Registration Corporation Limited L=Hong Kong ST=Hong Kong C=HK	7c8a89a56a845332fad3b22ff64981418obffde7	rsaEncryption	(2048 Bits)	sha256WithRSAEncryption	b4e2b7cd19104fb1e81e0774b073e06644448c8c	97:7B:CE:D8:9D:7B:83:75:1D:65:0E:C3:B6:FD:94:72:B7:13:B2:3B:8E:C1:FC:EC:0F:96:6D:53:67:7E:44:5E

Certizen Limited

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PricewaterhouseCoopers
22/F, Prince's Building, Central, Hong Kong

January 2, 2026

Dear Sirs,

Assertion by Management as to the Disclosure of Business Practices and Controls over Hong Kong Internet Registration Corporation Limited ("HKIRC") with Certizen Limited ("Certizen") as its subservice organization – TLS Certification Authority Operations as of December 31, 2025

Certizen provides operation and maintenance services for HKIRC's CA systems and associated certificate services to HKIRC, who operates the Certification Authority ("CA") services and provides TLS CA services for the CAs enumerated in Attachment A.

The management of Certizen is responsible for establishing controls over its operations, to support HKIRC's TLS CA operations, including HKIRC's TLS CA business practices disclosure on its website, TLS key lifecycle management controls, and TLS certificate lifecycle management controls. These controls contain monitoring mechanisms, and actions are taken to correct deficiencies identified.

There are inherent limitations in any controls, including the possibility of human error, and the circumvention or overriding of controls. Accordingly, controls placed into operation can only provide reasonable assurance with respect to supporting HKIRC's Certification Authority operations. Furthermore, because of changes in conditions, the effectiveness of controls may vary over time.

Certizen's management has assessed HKIRC's disclosure of its certificate practice and Certizen's controls to provide operation and maintenance services for HKIRC's CA systems and associated certificate services in relation to TLS CA services. Based on that assessment, in Certizen management's opinion, as HKIRC's independent subservice organization, in providing operation and maintenance services for HKIRC's CA systems and associated certificate services in Hong Kong Special Administrative Region of the People's Republic of China (including Facility 1 and Facility 2), as of December 31, 2025, Certizen has:

- suitably designed, and placed into operation, controls to provide reasonable assurance that:
  - the integrity of keys and TLS certificates it manages is established and protected throughout their lifecycles; and
  - TLS subscriber information is properly authenticated (for the registration activities performed by HKIRC with Certizen as its subservice organization);

- suitably designed, and placed into operation, controls to provide reasonable assurance that:
  - logical and physical access to CA systems and data is restricted to authorized individuals;
  - the continuity of key and certificate management operations is maintained; and
  - CA systems development, maintenance, and operations are properly authorized and performed to maintain CA systems integrity,

in accordance with the WebTrust Principles and Criteria for Certification Authorities – TLS Baseline v2.10.

Eva Chan
Chief Executive Officer of Certizen Limited

Attachment A

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Sub CAs

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2	1	CN=HKCA d-Cert OV SSL CA 2 - 25 O=Hong Kong Internet Registration Corporation Limited L=Hong Kong ST=Hong Kong C=HK	CN=HKCA Root CA 2 O=Hong Kong Internet Registration Corporation Limited L=Hong Kong ST=Hong Kong C=HK	5ca4c51c0f85ba969b728cc25ff17cc9d068d07f	rsaEncryption	(2048 Bits)	sha256WithRSAEncryption	87404afbddcd2a406efc0b00695b96729cc90261	C5:F4:88:39:B2:14:94:A1:16:9D:36:FB:0C:52:D1:98:FD:3F:62:DF:1D:2E:21:79:E0:94:1E:4F:B6:08:41:52

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